



# BIOSYSTEMS ENGINEERING

## PRE-MED OPTION

Course Plan  
2025-2026  
125 Hours

### Year 1

17 Credit Hours

#### BAE 1011

Intro to  
Biosystems  
1 Hour  
Note 1

#### UNIV 1111

First Yr. Seminar  
1 Hour

#### MATH 2144

Calculus I  
4 Hours  
Note 2

BIOL 1113 &  
BIOL 1111 or  
BIOL 1114  
4 Hours

CHEM 1314  
Chemistry I  
4 Hours

#### ENGL 1113

Engl Comp 1  
3 Hours  
Note 3

MATH 2153  
PHYS 2014  
BAE 3033  
ENSC 2113  
ENSC 2213

BAE 3033  
MICR 2123  
BIOL 1604

CHEM 1314  
MICR 2123

ENGL 1213

17 Credit Hours

#### BAE 1022

Exper Methods  
2 Hours  
Note 1

#### PHYS 2014

Univ. Physics I  
4 Hours

#### MATH 2153

Calculus II  
3 Hours

CHEM 1515  
Chemistry II  
5 Hours

#### ENGL 1213

Engl Comp II  
3 Hours  
Note 3

MATH 2144

MATH 2144

CHEM 1314

ENGL 1113

ENSC 2113  
ENSC 2213  
BAE 3033  
\*PHYS 2114

MATH 2163  
MATH 2233  
IEM 3503  
ENSC 2613  
ENSC 3233

ENSC 2213  
CHEM 3053  
MICR 3033

Patterned = General Education Course

Shaded = Course requires a grade of C or above

#### Course No.

Course Name

# of Hours

See Note #

Subsequent  
Courses

Prerequisites

### Year 2

15 Credit Hours

#### BAE 2013

Comp Methods  
3 Hours  
Note 1

#### \*PHYS 2114 or PHYS 1214

Univ. Physics II  
4 Hours  
Note 4  
\*Course not required...

#### MATH 2163

Calculus III  
3 Hours

ENSC 2213  
Thermodynamics  
3 Hours

#### ENSC 2113

Statics  
3 Hours

#### HIST 1103

American Hist  
3 Hours  
Note 5

PHYS 2014

MATH 2153

MATH 2144  
PHYS 2014  
CHEM 1515

MATH 2144  
PHYS 2014

STAT 4033 or  
STAT 4073

BAE 3213

ENSC 2143  
ENSC 3233

17 Credit Hours

MATH 2144  
BIOL 1113 &  
BIOL 1111 or  
BIOL 1114  
PHYS 2014

#### BAE 3033

Biomaterials  
3 Hours

#### CHEM 3053

Organic Chem  
3 Hours

#### MATH 2233

Diff Equations  
3 Hours

ENSC 3233  
Fluid Mech  
3 Hours

#### ENSC 2143

Strength of Mat'l  
3 Hours

#### ENGR 1322 or ENGR 1332

Engr Design  
2 Hours

CHEM 1515

MATH 2153

MATH 2153  
ENSC 2113

ENSC 2113

CHEM 3153  
BIOC 3653

BAE 3013  
BAE 3023

BAE 3013  
BAE 3213

BAE 4012

#### Other Requirements:

- A minimum 2.0 Technical GPA. The Technical GPA is calculated from all BAE prefixes or substitutions to BAE courses.
- Students are required to complete the Fundamentals of Engineering (FE) exam prior to graduation.
- A minimum of 40 semester credit hours and 100 grade points must be earned in courses numbered 3000 or above.
- A 2.00 GPA or higher in upper-division hours.

#### NOTES:

- 1) BAE 1011, BAE 1022 and BAE 2013 can often be substituted for students transferring into the department internally or externally from another institution. Please contact the department for more information.
- 2) The prerequisite for MATH 2144 is to score a minimum of 75 on the Math Placement Test or by earning a minimum grade of "C" in MATH 1813 or MATH 1715 or MATH 1613.
- 3) See Academic Regulation 3.5 (<http://catalog.okstate.edu/university-academic-regulations/> #english-composition).
- 4) The PHYS 2114 course is no longer required to graduate with a Biosystems Engineering Degree in the Pre-Medical Option, but it is strongly encouraged to take this course or PHYS 1214 if considering applying to medical school. Please consult your Pre-Health advisor.
- 5) HIST 1103 can be replaced with HIST 1483 (H) or HIST 1493 (DH).
- 6) Additional general education credit hours are required to meet the total 40-hour minimum of general education credit. Students must take 3 hours of credit in courses designated "G," 3 hours of credit in courses designated "S," 3 hours of credit in courses designated "D," and 6 hours of credit in courses designated "H." Additionally, students must take a course designated "Q," "H," "N," "S," "D," "G," or "F." There will be courses that can be paired, for example (DH) courses, that can be used to meet multiple general education designation hour requirements.
- 7) BAE 4001 and BAE 4012 are to be taken concurrently.



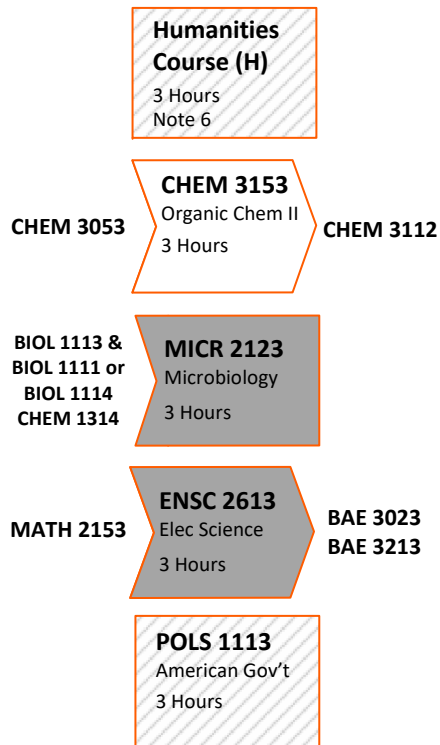
# BIOSYSTEMS ENGINEERING

## PRE-MED OPTION

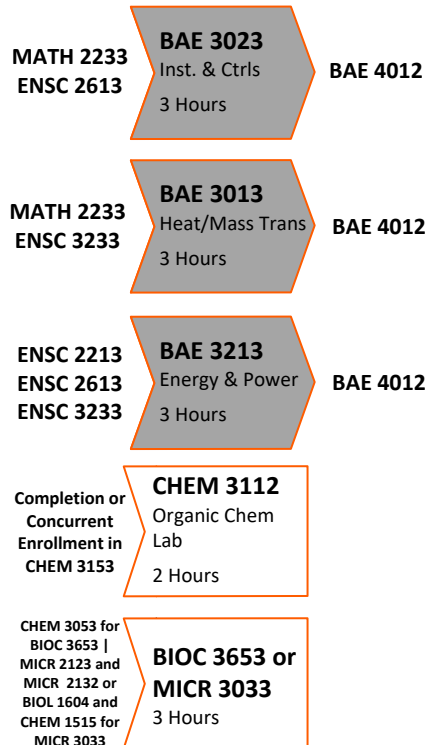
Course Plan  
2025-2026  
125 Hours

### Year 3

15 Credit Hours

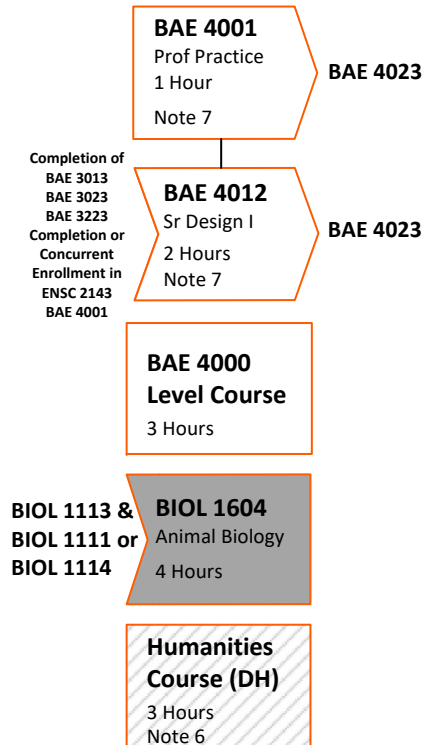


14 Credit Hours

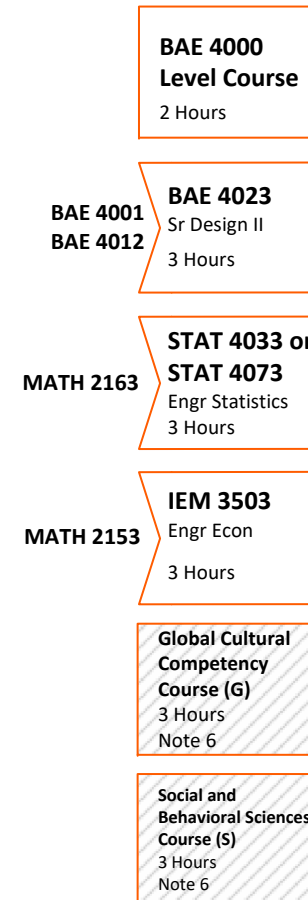


### Year 4

13 Credit Hours



17 Credit Hours



Patterned = General Education Course

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**Course No.**  
Course Name  
# of Hours  
See Note #

**Subsequent Courses**

**Prerequisites**

#### Additional State/OSU Requirements:

- At least: 60 hours at a four-year institution; 30 hours completed at OSU; 15 of the final 30 or 50% of the upper-division hours in the major field completed at OSU.
- Limit of: one-half of major course requirements as transfer work; one-fourth of hours earned by correspondence; 8 transfer correspondence hours.
- Students will be held responsible for degree requirements in effect at the time of matriculation and any changes that are made, so long as these changes do not result in semester credit hours being added or do not delay graduation.
- Degrees that follow this plan must be completed by the end of Summer 2031.

Additional recommended prerequisite courses to complete prior to applying for medical school:

- MICR 2123-Introduction to Microbiology Lab
- Our degree requirements require a student to take either BIOC 3653 or MICR 3033. Some medical programs require the completion of both courses.
- One (minimum) of the following: BIOL 3023, BIOL 3204, BIOL 3214, BIOL 4024, BIOL 4104, BIOL 4134, BIOL 4283.
- PSYC, SOC, PHIL and Humanities Coursework recommended.

\*These recommended requirements are based on unofficial, regional professional school program digital guides. Individualized requirements for admission to medical school may vary from program to program. For specific questions, please contact your pre-health advisor.